ABSTRACT

THE LARVACIDAL EFFECT OF THE MANGOSTEEN (*Garcinia mangostana* Linn) PEEL EXTRACT TO THIRD INSTAR *Aedes aegypti* LARVA

By

PUTRI RAHAMAWATI

Dengue Hemorrhagic Fever (DHF) is a fatal diseases because of its ability to become severe in short periods and cause many deaths. The prevention of DHF by eliminating the vector by using insectisicides is done all the time. Chemical insecticides have a lot of adverse effects to human’s health and enviorenment. Those adverse effects can be minimalalited using natural insecticides and one of them is mangosteen (*Garcinia mangostana* Linn) peel extract. The mangosteen (*Garcinia mangostana* Linn) peel extract contains alfa-mangostin, saponin, flavonoid and tanin that can kill the larva.

This research aims to know the effectiveness, LC$_{50}$ and LT$_{50}$ of mangosteen (*Garcinia mangostana* Linn) peel extract as larvacide. This study was an experimenal study and used randomized control trial method. Divided into 6 groups of experiment wich is 0% (control negative), 0,25 %, 0,5%, 0,75%, 1% and abate 1% (control positive). Each container was given 200 ml ethanol 96% mangosteen peel extract. Subjects are 600 third instar of *Aedes aegypti*, contained
25 larvae and replicated four times and during the experimentation, larva are fed with fish food. The result was analyzed using Kruskal-Wallis test and post-hoc Man Whitney.

The result showed that the average number of death larva are 81 % in 0,25 % consentration; 91 % in 0,5 % consentration; 95 % in 0,75 % consentration and 100 % in 1 % consentration. Therefore, the most effective consentration was the 1 % consentration because could kill the larva faster. The LC$_{50}$ was 2.458 % in 40 minute; 2.267% in 60 minute; 1.923% in 120 minute; 1.096 % in 240 minute; 0.585 % in 480 minute and 0.219 % in 1440 minute. The LT$_{50}$ was 484.411 minute in 0,25 % consentration; 387.729 minute in 0,5 % consentration; 426.910 minute in 0,75 % consentration dan 234.937 minute in 1 % consentration.

**Key words**: *Aedes aegypti*, mangosteen (*Garcinia mangostana* Linn) peel extract and larvacides